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ABSTRACT

A qualitative study focused on incubation and illumination within the act of writing to determine if life-span development affects image production during these creative, cognitive acts. Sixteen subjects of both sexes from four age groups represented major developmental stages in the life cycle. The research design provided two 90-minute sessions scheduled approximately four days apart with an incubation activity assigned between sessions. Writing activities and taped interviews occurred during both sessions to determine how each subject experienced imaging in the incubation and illumination stages of writing. Results showed that writers performed in recurring phases, often editing and formulating new thoughts at the same time. Two types of incubation operated in their writing patterns: (1) the recurring on-going incubation that is functioning while mental revising is taking place, and (2) the long-term incubation period that may go on for days, months, or years. The assigned incubation activity heightened awareness of the functioning of the unconscious. Even though life-span development appeared to affect subject matter of images, it appeared to have little effect on writing patterns. (DF)

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THE WRITING PROCESS:

EFFECTS OF LIFE-SPAN DEVELOPMENT ON IMAGING

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ABSTRACT

This qualitative study focused on incubation and illumination within the act of writing to determine if life-span development affects image production during these creative, cognitive acts. Subjects from four disparate age groups (16 total) represented major developmental stages in the life cycle. The research design provided two 90-minute sessions scheduled approximately four days apart with an incubation activity assigned between sessions. Writers performed in recurring phases, often editing and formulating new thoughts at the same time. Two types of incubation operated in their writing patterns: (a) the recurring on-going incubation that is functioning while mental revising is taking place, and (b) the long-term incubation period that may go on for days, months, or years. The assigned incubation activity heightened awareness of the functioning of the unconscious. Even though life-span development appeared to affect subject matter of images, it appeared to have little effect on writing patterns.

Recent research on the act of writing continues to highlight the importance of approaching the teaching of writing as a process-centered activity rather than a product-oriented task. Increasingly, articles are being written on why writing instructors must consider abandoning methods focusing on exclusively evaluating finished products and instead incorporating a developmental approach to a total writing program. Even though this change in focus is just now gaining momentum, this paradigm shift has been forming slowly over the past two decades.

BACKGROUND

Regardless of how they are categorized, certain mental activities guide the act of writing. As early as 1926, Graham Wallas in The Art of Thought defined progression of creative thought in the following manner:

(1) preparation - formulation and exploration of a subject (may be likened to prewriting)

(2) incubation - unconscious thought

(3) illumination - possible solution (may be likened to writing)

(4) verification - test of hypothesis (may be likened to rewriting)

These divisions of thought, now frequently regarded as more overlapping and recursive, continue to serve educators as they explore inquiry and expression. The interfacing of mental activities

involved in preparation (prewriting), illumination (writing), and verification (rewriting) have been examined by a number of researchers (Blau, 1983; Bridwell, 1980; Emig, 1971; Flower & Hayes, 1981; Graves, 1975; Matsuhashi, 1981, Perl, 1979; Pianko, 1979; Shaughnessy, 1977; Sommers, 1980; Stallard, 1974). These researchers devised various methods of observing behaviors and written products in their examinations of basic processes involved in producing written discourse.

While a number of studies have focused on the actual behavior of writers throughout the composing process, descriptive detail of the process of moving back and forth from incubation to illumination remains sparse and difficult to report with any degree of precision. Even more rare is the focus on incubation and illumination activities in textbooks and classroom instruction. Perhaps because of the dimly understood complex qualities, many researchers, textbook authors, and writing instructors tend to ignore their importance, placing undue emphasis on the conscious analytical procedures as if these alone were sufficient for the creative, complex, process of writing.

The focus of this study is the exploration of the activity of the collective unconscious (Jung, 1964) as it leads to imagery, based upon the theory that humans are symbol-making animals (Campbell, 1972; Langer, 1942; Neumann, 1954; Polanyi, 1958). The process will be further traced as image turns into thought/language. Following imaging is inner speech ". . . a dynamic, shifting, unstable thing, fluttering between word and thought. . ." (Vygotsky, 1962). Completing the illumination stage is the transcription, the act of placing words on paper.

This movement through incubation and illumination is most certainly affected by the individual's life experiences which help distinguish or identify every perception and relationship. Each person's reaction is shaped by an internal ordering referred to as "implicit" knowledge by Polanyi (1958, 1966) and the "implicate order" by Bohm(1978). These internal orderings are further influenced by stages of development during the human life-span.

The fact that the life cycle is an organic whole with each period or stage containing all the others is plausible. Less obvious is how life-span development impacts on imaging during the creative stage of the writing process. This study worked toward that end of discovery.

PURPOSE

The purpose of the study was to examine incubation and illumination within the act of writing and to determine if individual stages of development affect image production during these creative, cognitive processes. The major approach involved focusing on writing as a process-oriented activity with particular attention directed to imaging, a phenomenon which occurs during incubation and illumination,

two distinct and recurring phases of the writing process.

The approach further involved observing, analyzing, and comparing responses during selected writing activities of 16 subjects representing four distinct developmental stages as outlined by stage theorists (Gould, 1978; Levinson, 1978; Sheehy, 1976, 1981). Through these multiple comparative analyses, psychological and developmental aspects of a person's life were examined to see how they affected the composing process.

Research questions addressed through this approach include the following:

1. How do writers write? What cognitive processes do they go through? Can observation of patterns and processes aid in establishing a universal "model" of writing?
2. What are some identifiable characteristics of incubation? How does this stage lead to illumination in the creative phases of writing?
3. What is the nature of images? How do they reflect past experiences and layers of consciousness?
4. How does life-span development affect the processes of writing and the nature and content of images?

METHOD

The population for this study consisted of 16 writers: four subjects were in the preadolescence (9-12) age group; four subjects were in the adolescence-to-early 20s (13-21) age group; four subjects were in the mid-life (40-45) age group; four subjects were in the late adult (65 and older) age group. Both sexes were represented in each age group.

Even though most life stage theorists, including Levinson (1978) and Sheehy (1976), propose more than four stages that describe specific demensions of development, the researcher selected these four particular stages because each represents major turning points or developmental steps in the life cycle. They also present a fairly evenly spaced distribution of the entire life cycle.

The research design provided two 90-minute sessions scheduled approximately four days apart. Writing activities and taped interviews occurred during both sessions in the attempt to determine how each subject experienced imaging in the incubation and illumination stages of the writing process.

During Session I and Session II data were gathered in three basic stages:

Session I Stage 1 Taped interview to gather the following retrospective data:

1. Subject's perception of his or her own writing process from past performance.
2. Subject's identification of some vivid experiences of imaging which have guided writing.
3. Subject's exploration of past experiences of incubation and illumination and how these might have influenced the revision process.

Session I Stage 2 The researacher explained that she would be asking about thought as it progresses through the writing process. Subjects were told they could elect to think aloud (talk out their thoughts), or they could instead choose to explore this mental activity though introspection.

The researcher then offered verbal stimuli designed to

evoke images.

1. Subject was given two or three minutes to record images for each of the following verbal stimuli:
   a. A gentle summer rain
   b. The county fair
   c. An evening winter walk
2. Subject was allowed approximately 15 minutes to develop a short poem inspired by one of these stimuli.
3. Follow-up interview was conducted in an effort to reconstruct the mental processes that accompanied the creative writing.

At the close of the first session the subject was informed that Session II would consist of an interview designed to explore imaging and writing activities emanating from an incubation exercise. The following instructions were presented to the subject:

Incubation Activity

Do not consciously try to form any images when you first read the topic for your next poem. Rather, let the idea rest in your unconscious and let images come spontaneously at any time.

As you go about your daily routine between now and the next meeting, be alert to any mental images that come to mind on their own accord. When mental images and resulting creative word passages crowd into your thoughts, immediately record them.

As soon as a few ideas, insights or images have occurred (this could take two or three days), you may begin writing. Either prose or poetry is acceptable, although generally the essence is in the poetic kernel. Expand and develop any ideas as you wish. There is no prescribed length.

Please bring this material (<u>everything</u> at all stages) with you for the next session.

TOPIC:

Imagine three gates in a row, one behind the other. Open each in turn and then report what you see, hear, and feel.

The gates image was inspired by Joseph Shorr (1974), who reports in Psychotherapy Through Imagery using this image in some of his classes to evoke vivid, often symbolic imagery. Four to five days at minimum lapsed between sessions for the subject to engage in this activity.

Session II Taped interview to explore writing and imaging that occurred during this sustained writing acitvity.

All subjects were asked to complete a questionnaire measuring the vividness of mental images. The instrument used for this purpose was the Shortened Form of Betts' Questionnaire Upon Mental Imagery, developed and reported by Sheehan (1967).

In order to acquire ample data about the imaging activities of writers of various ages, this researcher chose the following methods of data collection as appropriate and useful: conducting intensive interviews, conducting writing activities, and administering a questionnaire inventory to assess vividness of imagery.

The interview was structured to encourage the subjects to offer their own reports of the imaging and writing processes, thus allowing the interviewer to participate as observer-discoverer (Dexter, 1970). For the most part, semi-structured questions directed the responses since this approach limits the universe of questions but allows the respondent considerable freedom of reply. Always the questions were formulated to elicit depth, range, specificity, and personal context in responses (Merton, 1955).

Writing Activities

Writing activities were designed for the purpose of evoking imagery and providing an avenue to report cognitive processes during the act of composing. All subjects were given a choice of (1) thinking aloud

(verbalizing their thoughts) while they wrote or (2) reconstructing the mental processes through introspective restructuring. Because of recent contradictory views regarding the adequacy of the thinking-aloud protocol, the researcher decided to permit the subjects to share their accounts of these processes in a style least inhibiting to them.

DATA ANALYSIS

The analysis of data was accomplished through the constant comparative methodology proposed by Glaser and Strauss (1967). This approach permits the researcher to arrive at certain findings by assembling data, searching for linkages, and developing conceptual categories. Theory emerging from these procedures is "grounded" in the data. For each age group a case study supplemented the general analysis to permit indepth evaluation and observation.

The Shortened Form of Betts' Questionnaire Upon Mental Imagery (Sheehan, 1967)) was included in the research design to measure individual subject's vividness of imagery. For this study, however, the instrument failed to yield meaningful data. Selecting a rating from a seven-point scale was an extremely troublesome decision for most subjects. Almost all reported uncertainty in marking responses. Indeed, it appeared as though the subjective experiences of images evoked by this test bore little relationship to any measurable capacity. For this reason, the researcher decided to exclude the questionnaire scores in formulating conclusions for this study.

RESULTS

1. All writers proceeded in a recursive rather than a linear sequence as they performed in these recurring phases:

a. the catalyst that prompted the writing

b. the image or insight which involved a struggle to connect words to experience

c. the attempt to find an appropriate ordering of experience

d. the internal reordering and revising of what has been written.

Though unpredictable in length, frequency, or sequence, each phase was in integral part of each completed written activity. While each writer performed in these recurring phases, the researcher hastens to conclude there is no single, uniform process of writing. Rather, age/stage as well as individual, even idiosyncratic, features influence processes of writing.

2. Imaging was instantaneous for all writers and reflected the accumulation of perceptions and experiences related to their age and stage in life-span development.

The images, which came freely and rapidly, were usually affected by life age and stage.

a. Preadolescents, preoccupied with confirming or validating earlier social learnings, are still somewhat unfettered by society's constraints and imaged fanciful motifs in the world of make-believe.

b. Late adolescents, involved in an internal and external quest for identity and life-choices tended to image actively in both the mythological world of fantasy and everyday reality.

c. Mid-life adults, engrossed in re-evaluating accomplishments and future directions, were included to image in a symbolic mode

drawing from both the conscious and the unconscious.

d. Older adults moving toward individuation imaged from their accumulated reservoir of experiences as well as reflective levels of awareness from the conscious and the unconscious.

3. The impetus to continue the unique, individual path of thought evolution depended on the skeleton of meaning that emerged from initial images.

4. Writing-out was a key method for interpreting the initial images -- for filling in the initial skeletons of meaning.

All writers, with varying degrees of confidence and practice, trusted their intuitive power to select the right words and arrange them into new constructs of meaning. Thus, they were able to make initial jottings, experiment with loose ends of thought, indulge in a mental hop-scotch of thought and word, all with a conviction that meanings would ultimately evolve and a comprehensible expression would eventually emerge.

5. All writers sensed the importance of incubation in their writing.

Two types of incubation operated in their writing patterns: (a) the recurring, on-going incubation that is functioning while mental revising is taking place; and (b) the long-term incubation period that may go on for days, months, or years. Following the relaxation of the incubation phase is the illumination stage. The illumination stage enabling writing may inspire an entire piece, or illumination may continue to inspire sporadically, urging the writer to alter what has already been written.

6. All writers expressed awareness of both conscious and unconscious influences to begin and complete their creative writing.

The assigned incubation activity heightened awareness of the functioning of the unconscious. Those writers who experienced sudden enlightenment were especially aware of this deeper mental functioning where structural patterns of stored experience emerged. This flash of insight was accompanied by personal energy and power focused in what for the individual was a significant direction. Increased awareness triggered a releasing, enervating, and productive flow of expression for these subjects. A sense of fulfillment accompanied the final stages of the writing activity.

7. The presence of symbolism characterized a significant number of images.

While some of the symbolic images reflected past personal experiences, frequently they suggested more broad cultural meanings. Images in this second category appear to spring from the collective unconscious, the deepest layer of unconsciousness serving as a reservoir of instinctual, biologically inherited material common to all human beings. With the exception of one subject, the writers were unaware of the archetypal symbolism behind their images.

Typical of the most striking examples of these primordial images are those of the mother archetype, as exemplified in this image: "All life in earth is locked within her womb." This image relates to the mother symbol, to place of origin, a unifying, protecting power. Another poem describing the asterisk offers deep symbolic meaning with "twigs branched like hair on end", "roots branched like outstretched hands" suggesting irregular shapes extending outward: yet, the unifying

3. Writing habits defy precise predictability.

All writers in this study admitted to irregular sequences of thought patterns and writing activities. Unexplainable variables in the cognitive processes prevent researchers from isolating or defining a "true" model of the composing process. Idiosyncracies of the subjects sampled coupled with the inability to actually see what goes on inside the mind complicate the researcher's task in attempting to design a stage model.

4. Life-span development appears to have little effect on writers' patterns.

Approaches to writing tasks vary little with respect to age and stage in life. All writers are as likely to work from parts to wholes as from wholes to parts; the concept of the completed piece shapes the immediate focus just as frequently as the concern for what comes next affects the total finsihed piece.

Basic patterns, styles, and approaches remain unchanged over the years. Mid-life and older adult writers in this study tend to write with the same rhyme schemes and stylistic conventions established early in their writing habits.

5. Life-span development seems to affect subject matter of images but has no effect on vividness or modality.

While accumulated perceptions and experiences seem to affect what writers are inclined to image, other aspects of imaging remain unaffected by age or stage. Degree of vividness and mode preference appear unaffected by life-span development.

6. Pacing and rhythm are irregular and unpredictable for writers of all ages.

A number of writers claimed that writing frequently flows effortlessly

mandala form brings it together with "X-ray eye", "round, rayed sun", and "solid core." Universality of meaning comes through this depiction of the unification of parts of the self into a whole. Ego differentiation is suggested as the psyche moves toward individuation. Also carrying universal meaning are the images of mythological figures and life's cyclical patterns.

SPECULATIONS

In the preceding section the results were formed after rich and varied data were reduced to consistent findings. This section, however, serves as a kind of sounding board to state conclusions of a more speculative nature, to make observations about aspects of the writing process which, though very real, defy categorization or reduction. Some observations in this section may be too sweeping or forceful to be appropriately labeled "conclusions"; yet, their significance demands recognition.

1. Writing serves as a communicative outlet -- a natural force that must happen.

Writers in this study claimed the act of writing helped shape and clarify ideas in their formative stages. Because thinking and writing are concurrent activities, they serve to foster and augment one another. Not only does writing permit a sharing of thoughts with others, it promotes an ordering of perceptions and experiences within oneself.

2. Writing is more of an inborn, intuitive gift than a learned skill.

While precisely defined rules and conventions can be presented and practiced through drill and exercise, true creative invention comes as natural, unbidden instinct. Guidelines of usage, syntax, and style may certainly refine technique, but even these conventions are more readily learned than taught.

on the page, often with the hand seemingly leading the mental flow. These same writers, on the other hand, also claimed periodic writing blocks and experienced exasperating difficulty in writing anything.

7. A final speculation may be more aptly phrased in the form of a question: Is it possible to tap or harness the levels of unconsciousness to determine what degree of influence the unconscious really has in shaping imaging and the conscious flow of thought?

Perhaps this final speculative query may signal the beginning of other cycles of inquiry. If the conclusions and speculations have raised more questions than they have answered, then they have succeeded in advancing the developmental theory of writing -- since the nature of developmental theory implies that it is always in process.

DISCUSSION

The findings in this study can be examined for their appropriateness and usefulness for practical application in the teaching of language arts. That the teaching of writing is involved in a paradigm shift is widely acknowledged. This shift reflects a focus from the traditional, product-oriented, content-conscious point of view to a more process-oriented, holistic point of view.

Despite this growing awareness of shift in focus, a vast number of writing teachers still cling to the traditional paradigm highlighting spelling, punctuation, usage, and capitalization. Because these features are most readily identified, they too often receive a disproportionate amount of classroom instruction. That which is not measured is often regarded as too difficult to see, too difficult to explain, and especially too difficult to assess.

In order to cease looking at text autonomously, as text alone, writing must be viewed within a total rhetorical context which includes writer, audience, and world as well. And unless composing as a process is actually taught, not just identified, the idea cannot be useful in a practical sense. Instead of thinking of writing as a set of conventions to be manipulated, it must be viewed as the making of meaning.

This process begins by each person's unique theory of the world. Michael Polanyi (1962) suggests this knowing evolves from an unnamed logic within us which he terms "implicit knowledge." The potential structure is there waiting to be shaped by experience. Personal knowledge, then, is formed through need and an intuitive sensing or hunch that something is true. Planning and eventual execution of these plans may validate or invalidate this hunch, but the intuitive knowing was already there.

> Tearing away the paper screen of graphs, equations, and computations, I have tried to lay bare the inarticulate manifestations of intelligence by which we know things in a purely personal manner . . . personal knowledge in science is not made but discovered. (Polanyi, 1962, p. 64)

George Kelly (1955) refers to this kind of knowledge as "personal constructs"; Margaret Donaldson (1978) labels it "embedded thought"; David Bohm (1978) calls it an "implicate order"; Susanne Langer (1953) notes the importance of "prelogical conceptions"; and Coleridge maintained that the poetic imagination "shapes as it develops itself from within." Yet, while everyone possesses this internal ordering, each person views the world differently because of differing experiences and differing personality typologies.

Perhaps writing can be taught best by conceiving of it as a continuum of making meaning, by seeing the writing process an analogous to all those processes by which we make sense of the world. Rather than teaching

writing as an isolated set of skills, we need to let students know that writing does have something in common with other things they do. Taught as a process of making meanings, writing becomes taking in an experience, forming an opinion, finding new directions. Each person's natural internal ordering includes the apparatus to make meaning: thinking, perceiving, and writing.

Meanings must be found and formed through a "personal construction" of experience (Kelly, 1955). Findings from the imaging activities in this research design indicate all subjects made meaning (furthered their own theory of the world) from the images shaped by present context, past experiences and remembrances, and the mysterious deeper levels of unconsciousness only dimly understood. Just as language itself was a great heuristic in naming and interpreting images in this study, so, too, can language serve as the same heuristic in the classroom in permitting students to build their personal constructs.

Such an approach incorporates and correlates a developmental approach to both the refinement of language skills and the refinement of personal constructs influenced by the life-span cycle. Language arts curriculum design, whether for elementary, secondary, or higher education, ensures the functioning of this developmental theory by permitting students to learn that making meaning is the work of the active mind of any age or stage in life and thus, within their natural capacity.

This developmental, process-oriented approach has decided implications for pedagogy and course design. Writing activities must begin with resources of the self, then diverge outward toward knowledge of the world and awareness of audiences beyond the self. To assure that writing is practiced regularly and extensively, students can be encouraged to

keep journals. Whether these are private or classroom projects, students can experiment with forms, ideas, voices, and audiences.

Another activity to foster command of writing skills is to encourage students to explore their own writing experiences. Student writers may engage in self-exploration by keeping a composing diary in which they record paths, procedures, and processes they go through in writing. A similar approach is keeping a retrospective protocol as some of the subjects did for this study. Notes are made about what seems to be happening as they write. All drafts and notes are dated and kept in order; then, after the project is completed, they describe and comment on the writer and what behaviors and strategies are used. That the exercise focuses on self-exploration assures an interesting and revealing object of study.

Sharing writing and gaining helpful responses from others in the classroom permit students to experiment with language -- play with it, work with it, revise and even start over again. To assure growth and the freedom to experiment, students need to be encouraged to make many new beginnings along with any number of different developments of these opening thoughts. As one writer in this study observed:

> There are many tracks and traces which are sort of paths not taken. As you go through a sentence, the verb is sort of a hinge of a sentence, and when the sentence turns on the verb, you have a few choices to make. When I make one choice, the other choices die.

Keeping those "other" choices alive must be a mission of the writing teacher. The inclination to explore several choices needs to be nurtured by permitting both verbal and written exchanges in class. In the classroom exchange, the various selves are heard and an audience's response is provided. Language is a dialectical process: the writers know what was said and

what can be understood from it, and when they get a response, they come to know what they mean when they hear what they say. It is this critical, reflexive character of language which allows and even inspires us to think about thinking.

Critical thinking and creativity can be fostered by extending assignments to provide incubation time for writers. Providing incubation time allows openness and relaxation of attention to external stimuli. Comments offered by subjects in this study verify and expand on creativity literature in reporting illuminating insights following a period of incubation. The "deep well of unconscious cerebration " (James, 1934; cited in Miller, 1972) is a common resource. These deep wells permit the writer to reach into various levels of conscious and unconscious awareness, to acknowledge and explore the origins and complexities of thought processes. Jung emphasizes the importance of tapping these various levels of awareness:

> Just as conscious contents can vanish into the unconscious, new contents, which have never yet been conscious, can arise from it . . . The unconscious is not mere depository of the past, but it is also full of germs of future phychic situations and ideas. (Jung, 1964, pp. 37-38)

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